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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/930,738

08/15/2001

Richard B. Dyott

KVC-022.03

1992

25181

7590

03/24/2003

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EXAMINER

NATIVIDAD, PHILIP SANA

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/930,738

Applicant(s)

DYOTT, RICHARD B.

Examiner

Phil Natividad

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Rejection is repeated and made Final. See Response to Arguments, below.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 13-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blake (,397) in view of Huang (,312). As to claims 1 and 19, Blake discloses source, fiber coil around a conductor, two polarization transformers (e.g. quarter wave plates 88 and 90), first and second directional couplers, and optical detector; except without disclosing all the claimed specifics of the polarization transformers. Huang teaches a polarization transformer comprising axially twisted fiber. Since Blake already discloses that the transformer/quarterwave plates may be a fiber of selected distance (Blake col. 4 lines 4-10), it would have been obvious to one of ordinary skill in the art to combine all the prior art to obtain applicant's claims as recited, for motivation of simple and well-aligned optics (Blake col. 3 lines 12-14, col. 2 lines 23-26; Huang col. 2 lines 51-56).

As to claims 2-3, 5; and 20-21, 23, note Huang col. 2 line 48, and note it would have been notoriously further obvious to one of ordinary skill to optimize or vary the well-known methods/apparatuses for making circularly polarized light, including using a QWP or longer lengths if at half-wavelength intervals (i.e., odd multiples of  $\lambda/4$ ). As to claims 4, 6; 22, 24, note quarter beatlength (col. 4 line 9 et al.) and laser diode (Figs. et al.) are disclosed in Blake.

Art Unit: 2877

As to claims 13-18 and 25-30, note they are analogous to claims 1-6 as an alternate embodiment of the invention using a reflector (disclosed in Blake, as element 46 in Figs.).

3. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blake in view of Huang as applied similarly to claim 1 above, except that it also would have been obvious to one of ordinary skill (as applicant agrees, in spec. p. 17 lines 4-11) that the location of the detector could be changed for motivation of optimizing the design as desired. Claims 8-12 are unpatentable analogously to claims 2-6 above.

### ***Response to Arguments***

4. Applicant's arguments filed 1/29/03 have been fully considered but they are not persuasive. All of applicant's arguments center on the premise that Huang teaches a fiber polarization transformer resulting in only linearly polarized light, rather than circularly polarized as in applicant's invention. However, what Huang actually teaches is creating definite states of polarization, including elliptical, linear, and circular (col. 2 lines 53-55, col. 4 lines 30-31). (Applicant's citation of Huang col. 3 lines 43-47 follow discussion of Huang's parent patent and teach a linearly polarized *component* with definite orientation... which is merely a prerequisite for further teachings in the next column (col. 4 lines 23+) which "reveals that the resulting output light of the invented fiber-optic element can take any SOP" (state of polarization).... "any SOP with a desired ellipticity, including linear and circular SOPs" can be generated (col. 4 line 30-31).)

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

Art Unit: 2877

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner can be directed to Phil Natividad whose telephone number is 703-306-5944. The examiner can normally be reached on Tuesday through Friday and alternating Mondays; and supervising patent examiner Frank G. Font can be reached at 703-308-4881.

In view of delays in mail delivery in recent days, we at the USPTO would like to encourage you to communicate with the USPTO via facsimile. Facsimile transmissions may be used for correspondence as set forth in 37 CFR 1.6 such as: amendments, petitions for extension of time, authorization to charge a deposit account, an IDS, terminal disclaimers, a notice of appeal, an appeal brief, CPAs under 37 CFR 1.53(d), and RCEs.

PTO Form 2038 should be used when authorizing payment by credit card; this form is maintained separate from the file to ensure confidentiality.

The USPTO has recently installed server software that enables us to automatically receive facsimile transmissions and route them to the appropriate groups. No special equipment is needed by our customers to use this system other than a regular facsimile machine. Each Technology Center has its own facsimile numbers associated with our server for Official replies to non-final Office actions and for Official replies to final Office actions. In addition, each Technology Center has a Customer Service Center on our server system, and can answer any general application status questions you might have, can provide Examiner information, and answer paper queries.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 or 703-308-7722 for regular communications and 703-872-9319 or 703-308-7722 for After Final communications.

Art Unit: 2877

Tech Center 2800 Customer Service is at 703-306-3329 or 703-872-9317. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the receptionist whose telephone number is 703-308-0956.



Phil Natividad  
Patent Examiner  
psn  
March 19, 2003



**FRANK G. FONT**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**